

SeaCom 2000 Call Data Manager Manual

Abstract: This document is the user manual for the MX 2000 call data manager application

Revision history

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SeaCom 2000 Call Data Manager Manual

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1. Call Data Manager (CDM)

This is the manual for the SeaCom 2000 Call Data Management system.

The manual starts by presenting some general concepts of the SeaCom 2000 access control and call data management system, followed by a detailed description of how to use the Call Data Manager application is used is provided.

1.1 What can I do with the call data manager

The Call Data Manager is used to maintain the user database of the SeaCom 2000 system. In order for the system to be able to control access to, and to keep track of the use of outgoing telephone lines, a database of authorised users is found on the SeaCom 2000 disk.

The CDM application enables the user to inspect the call data records created by the SeaCom 2000 telephone system, and to print the call data either as a simple print out or as an invoice printing. Exporting data to ASCII files is also possible.

The CDM application is used to maintain the charge rate database. The charge rates can be set for each type of outgoing line (trunk group) and a possibility for setting the rates depending on the destination of the telephone calls (B number) is given.

1.2 The client/server concept

The SeaCom 2000 system keeps the database on its own disk. It acts as the server of the SeaCom 2000 database system.

The CDM application is meant to operate as a client, either directly on the SeaCom 2000 system itself, or on a network computer.

The SeaCom 2000 system can thus reside in a remote room of the ship on which the telephone is operating, while managing the user database and the call data can be performed from any office or from the bridge, providing there is a network linked computer installed.

1.3 Installing the Call Data Manager with LAN access

The SeaCom 2000 Call Data Manager is delivered on a CD ROM. The LAN computer that is to operate the CDM application must therefore be equipped with a CD ROM drive.

To install the CDM system, do the following:

1. Insert the CD ROM and execute the SETUP application found on the disk.
Follow the instructions given.
2. Use the explorer to locate and connect the hard-disk of the SeaCom 2000 system.
3. Map the SeaCom 2000 disk onto the LAN computer as drive M: (or use a letter of Your own choice). Remember to click the "reconnect at logon".
4. Use the START / PROGRAMS / BORLAND C++ / BDE Configuration to start the Data base engine configuration.
5. In the BDE Configuration, chose the Aliases tab page
6. Select the "MX_DataBase" alias
7. In the Parameters window, edit the PATH to point to the SeaCom 2000 telephone system disk directory where the data base is found. The PATH parameter must then be set to: M:\MX2000\MX_DataBase\ when the SeaCom 2000 disk is mapped as drive M:
8. In the BDE configuration, select the Drivers tab page
9. Select the PARADOX driver from the Driver name list
10. Alter the NET DIR parameter according to step 7 above). The NET DIR parameter must be set to: M:\MX2000\MX_DataBase\ when the SeaCom 2000 disk is mapped as drive M:
11. Close the BDE configuration utility and restart Your computer
12. The SeaCom 2000 Call Data Manager should now be available from the START menu.
13. Start the MX_Configuration tool software, in order to edit setting in the SeaCom 2000 system itself. Use the menu Tools/Password and enter the 8 digit key purchased with the CDM system in order to enable the SeaCom 2000 system logging of call data. The MX_Configuration will display a message box when the CDM system is enabled. Close the MX_Configuration tool in order to pass the new settings to the SeaCom 2000.
14. Next use the MX_Configuration tool in order to ensure that a virtual call number of type "User account and PIN-code checker" is installed (default call number #10) and that the parameters is set as desired.

1.4 Backup

All data, including call data, generated by the CDM system is stored in PARADOX data base files. These files are found on the SeaCom 2000 disk in the C:\MX2000\MX_DataBase folder. In order to make backups of the call data, the contents of this folder must be copied onto a backup device via the network connection.

NOTE ! It is the responsibility of the network administrator to set-up a kind of daily backup procedure for backing up this folder.

2. General concepts

This chapter contains descriptions of basic SeaCom 2000 database concepts.

2.1 User account and PIN-code checker virtual

In order to make the CDM system active in an SeaCom 2000 system, a “User account and PIN-code checker virtual” must be installed on the actual system. Refer to the manual “SeaCom 2000 Configuration manual” for details of how to install this virtual call number.

2.2 SeaCom 2000 Users

Persons allowed to make outgoing call via the Call Data Management system is called users. Before conducting any telephone calls, the user must be entered into the user data base of the CDM system. This is done using the user editor.

2.2.1 Account number

All users are, by the SeaCom 2000, referenced by an account number. Typically the account number has a length of 2 digits, giving a total number of 100 users.

The length of the account number is selected upon the installation of the SeaCom 2000, so if necessary more than 100 user can be in operation, but in order to keep the work of dialling the account number low, as few digits as possible must be used.

All users have an account value, indicating the sum of charges of all telephone calls made. This account value is set to zero when the user is installed, or whenever an invoice printing has been performed.

2.2.2 PIN code

All users must keep their own self chosen PIN code. Upon installation of a new user into the SeaCom 2000 user database, the PIN code is reset as “new”. The first time the user makes an outgoing call using the account number, a self chosen PIN code must be entered. This PIN code is saved in an encrypted format into the SeaCom 2000 user database. The same PIN code must now be entered every time the user makes telephone calls.

The length of the PIN code is selected upon the installation of the SeaCom 2000. Typically 4 digits.

In the case that the PIN code has to be determined upon installation of the user, the PIN code can be entered from the CDM application using the menu Users/Enter PIN menu.

2.3 How the SeaCom 2000 processes an outgoing call

In order to understand the data entered and inspected by the Call Data Manager, a short description of how the SeaCom 2000 processor handles a telephone call follows:

2.3.1 Performing a telephone call

When a user wants to use an outgoing line for a telephone call, the dial sequence indicated below should be followed:

User	The SeaCom 2000 system performs
1. Dial '#10' turn	<i>This accesses a mechanism in the SeaCom 2000 which in collects and validates the user account number and the PINC code</i>
2. Dial the account number	<i>The account number is collected and checked to be found in the user data base</i>
3. Dial the PIN code	<i>The PIN code is collected and checked to be found in the user data base. When both the account and PIN is validated, the list of trunk lines found in the "User account and PIN-code checker" is used to select a trunk line to be used for the outgoing call. The call is then transferred to the selected trunk line.</i>
4. Dial the required number	<i>The trunk line collects the digits dialled and stores the digits for logging and for calculating the cost of the call When the B-answer is obtained, the start time of the call will be stored, and a second counter is started for counting the duration of the call</i>
5. Hang up	<i>When the user hang up, the SeaCom 2000 performs a calcu- lation of the price of the call using the charge data records. Then it appends a call data record to the calls data base and updates the account of the user.</i>

Note that it is possible to install more than one "User account and PIN-code checker", in the case that the access code to the "User account and PIN-code checker" is to be used when selecting different types of trunk line devices (Satellite, Cellular, shore e.t.c.)

2.3.2 Call data records

When a telephone call is completed, the SeaCom 2000 processor creates a call data record, which is appended to the call data record table of the SeaCom 2000 database. This call data record will, among other data, contain the date and time of the call, the duration, the destination number, the user account number and a charge, calculated using the charges table of the SeaCom 2000 database.

2.3.3 Marking call data as invoiced

A new call data record will contain a mark saying "Non-invoiced". Whenever an invoice is printed, the operator will be prompted: "Do you want to mark call data invoiced". When answering "Yes", all printed call data will have their mark set to "Invoiced", and the accounts of the user invoiced will be zero set.

3. The editors

The CDM system holds 4 editors:

- User data editor: entering, printing and inspecting data of users = account holders.
- Call data viewer: inspecting data of conducted calls
- Charge editor: entering, editing and inspecting the charges of the system
- Short number: inspecting and editing the short number list

The user editor is opened by default when the application opens, whereas the call data viewer and the charge editor can be opened by the use of the View menu. Figure 1 shows the View menu:

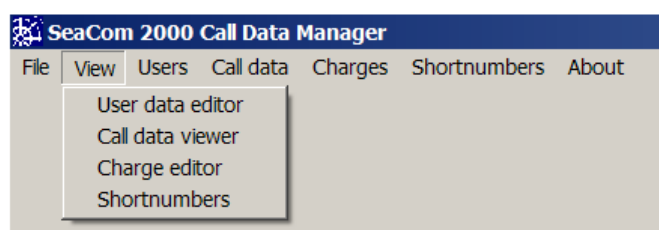


Figure 1. The Main form of the Call Data Manager showing the View menu

The call data viewer can be opened by double clicking a user in the user data editor, and all editors are opened whenever a menu operating on data covered by the editor is selected from the main menu.

3.1 Users data editor

The user data is inspected by the User data editor window shown in figure 3, and operated by selecting among the Users menu items shown figure 2.

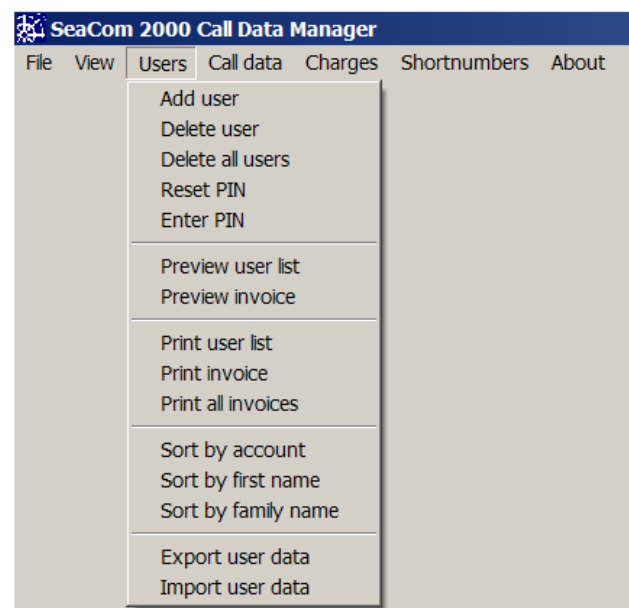


Figure 2. The menu used to operate the user data editor



Figure 3. The User data editor. The right mouse button pop up menu is shown.

3.1.1 The user data editor window

The main part of the user data editor contains the user data display. Navigating into the user data display is carried out by mouse clicking or pressing the arrow keys. When a user is selected, the account number of the user is propagated to the call data viewer so that this viewer will display call data of the user. Refer to **Error! Reference source not found.** for details on the call data viewer.

The data cannot be edited directly in the string grid

3.1.1.1 User data

4 strings of 25 characters can freely be used for describing the user..

3.1.1.2 Account number

The account number of the user is displayed in the Acc# column. Be careful to enter only unique account numbers and to keep the length matching the selected account numbers lengths. The default length is 2 digits.

3.1.1.3 Account

The Account column displays the sum of charges of non-invoiced calls for the user.

3.1.1.4 Calls

The Calls column displays how many calls in total the user has made.

3.1.1.5 Non-invoiced

The Non-invoiced column shows the number of non-invoiced calls. The sum of charges of these calls makes up the account value.

3.1.1.6 The summary window

The summary window contains the "Selected user" field showing the currently selected user together with the most important data of the user.

3.1.2 The users menu

The Users menu can either be found on the top main menu line or by right clicking the User data editor window. User data is operated by selecting among the menu items.

3.1.2.1 Add user

Select the “Add user” menu if a new user is to be entered. This will at first open a dialogue as shown in figure 4.

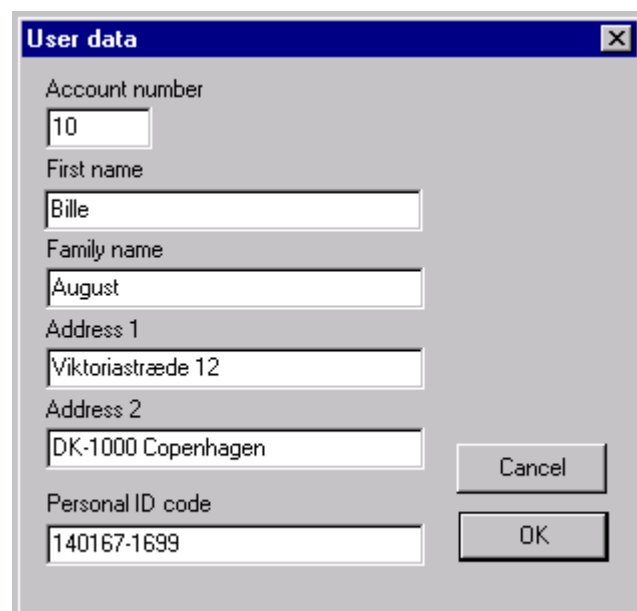
A screenshot of a Windows-style dialog box titled "User data" with a close button (X) in the top right corner. The dialog contains several text input fields and two buttons. The fields are labeled as follows: "Account number" with the value "10"; "First name" with the value "Bille"; "Family name" with the value "August"; "Address 1" with the value "Viktoriastræde 12"; "Address 2" with the value "DK-1000 Copenhagen"; and "Personal ID code" with the value "140167-1699". To the right of the input fields are two buttons: "Cancel" and "OK".

Figure 4. The new user data entry dialogue.

The account number can be selected freely, but when the form pops up, the system scans the data base for a free account number. It is not possible to use an account number that is already in use.

The 4strings: First name, Family name, Address1, Address 2 is used freely to describe the user. The Personal ID code is meant to hold the social security number of users, or any other global unique person identifier. This ID code is stored with each call data record.

3.1.2.2 Deleting users

The currently selected user can be deleted by choosing the “Delete user” menu. If any call data of the user still exist in the SeaCom 2000 database, the user can not be deleted, and you have to delete all call data records of the user before a delete attempt will be successful.

3.1.2.3 Delete all users

All users can be deleted by selecting this menu item. Only users having no call data will be deleted.

3.1.2.4 Reset PIN

When a user is just entered, the pin code will be reset to “new”. On the first attempt by the user to make an outgoing call, the used PIN code will be stored in the SeaCom 2000 user database.

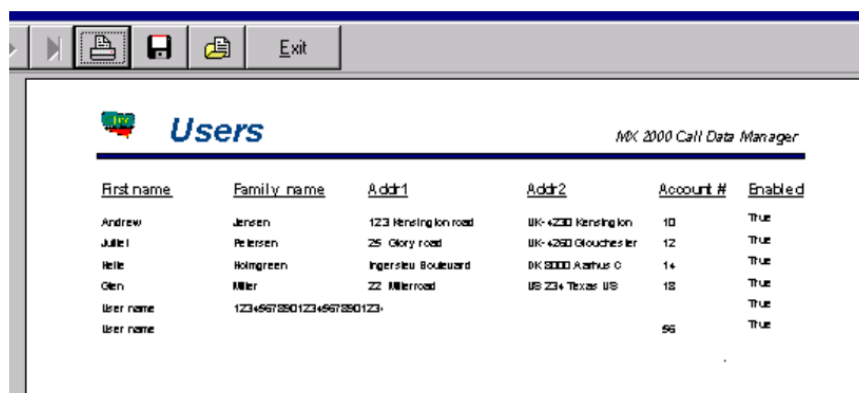
3.1.2.5 Enter PIN

If the PIN code has to be selected during installation of a user, it is possible to enter the PIN code by using this menu.

3.1.2.6 Previewing and printing of user list

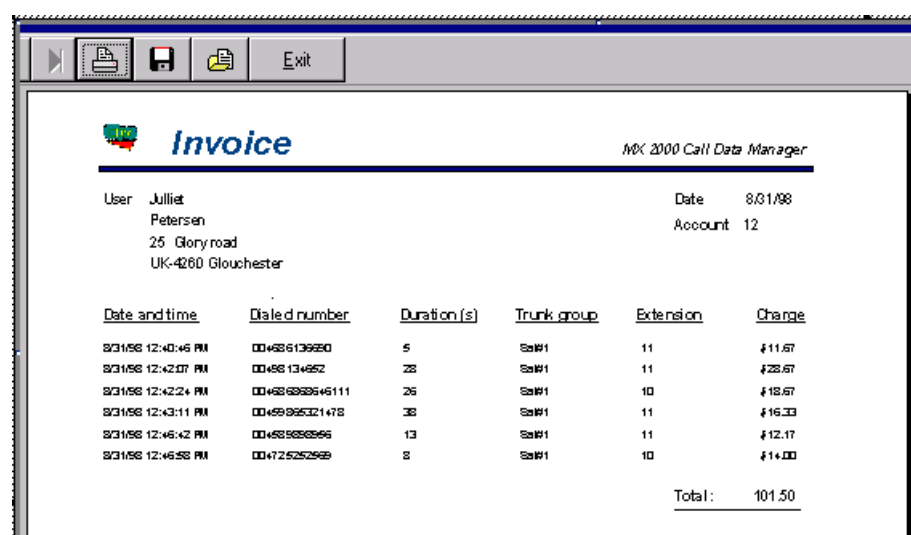
A list of users can be previewed/printed by choosing the menu items "Preview user list" and "Print user list".

Figure 5 shows a part of a print preview



First name	Family name	Addr1	Addr2	Account #	Enabled
Andrew	Jensen	123 Kenealing road	UK-4200 Kenealing	10	True
Julie	Petersen	25 Glory road	UK-4260 Gloucester	12	True
Helle	Holmgreen	Ingerslev Boulevard	DK 8000 Aarhus C	14	True
Ole	Miller	22 Millerroad	US 234 Texas US	18	True
User name	123456789012345678901234			56	True

Figure 5. A user list print preview.



Date and time	Dialed number	Duration (s)	Trunk group	Extension	Charge
8/31/98 12:40:46 PM	004586136930	5	Sa#1	11	\$11.57
8/31/98 12:42:07 PM	00458134652	28	Sa#1	11	\$28.57
8/31/98 12:42:24 PM	00458683646111	26	Sa#1	10	\$18.57
8/31/98 12:43:11 PM	00458395321478	38	Sa#1	11	\$16.33
8/31/98 12:46:42 PM	004585858596	13	Sa#1	11	\$12.17
8/31/98 12:46:58 PM	004725252525	8	Sa#1	10	\$14.00
Total:					101.50

Figure 6. The preview of an invoice printing.

3.1.2.7 Printing invoices of all users

Use the menu "Print all invoices" when all existing users are to be invoiced. A loop printing invoices for all users one by one will be entered, after the last user, the operator will be asked if all users should be set as "invoiced", if the answer is yes the CDM will mark all call data "invoiced", and set all user accounts to zero.

3.1.2.8 Sorting user data

Sorting the user data is made by clicking the: Sort by account, Sort by first name and Sort by family name menus.

Sorting will affect the User data display and the printouts selected.

3.1.2.9 Export user data

This menu is used to initiate an export of user data to an ASCII file.

Records of the file is separated by CR character and fields of the records are separated by a TAB character. This allows for easy import to applications like Excel e.t.c.

The records of such an ASCII file holds the following fields:

1. Account number
2. First name
3. Family name
4. Address 1
5. Address 2
6. PIN code (encrypted)
7. Account value
8. Enabled Boolean
9. Card number (not used)
10. Number of calls
11. Number of non invoiced calls
12. Personal ID code
13. Auxiliary field 1 (not used)
14. Auxiliary field 2 (not used)
15. Auxiliary account value (not used)

3.1.2.10 Import user data

User data can be imported from a file having the above format. Note that the account will be zero set during import.

3.2 The Call Data Viewer

The call data is inspected by the Call data viewer window shown figure 8 and operated by choosing one of the menus from the main menu line shown figure 7, alternative selecting the corresponding menu item from the right mouse button pop up menu also shown figure 8

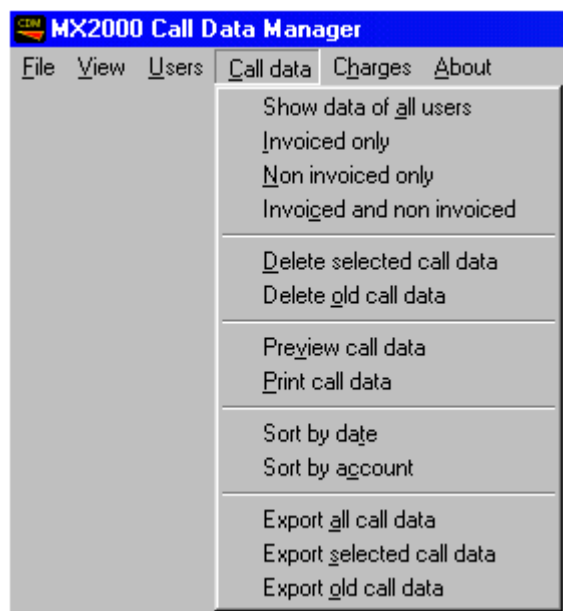


Figure 7. The main menu active when the call data viewer is selected

The Call Data Viewer is opened by using the View menu from the main menu or by double clicking a user in the list

Figure 8 shows the call data viewer:

3.2.1 The call data display

The major part of the Call Data Viewer form displays the call data records. The contents of these records will be described below. The user is not allowed to alter data of any call data records, so the display is a read only view of the calls.

3.2.1.1 Time of call

Displays the data and time the call was started. The format of the date/time is determined by the set-up of the operating system.

3.2.1.2 Acc.

This is the account number of the user that made the call. No other reference to the user is stored.

3.2.1.3 Called number

This is the destination number (B number) of the call. The full B number is displayed.

3.2.1.4 Duration

The duration of the call in seconds. The duration is shown in seconds, although charge rates are entered in minutes.

3.2.1.5 Charge

This is the price of the call calculated when the call was terminated based on the trunk group, the B number and the duration together with the charge rates set-up by the user using the Charge Editor. Refer to **Error! Reference source not found..**

3.2.1.6 Group

The trunk group through which the call was made. This corresponds to the trunk group set up in the Advanced Analogue Trunk set-up found in the SeaCom 2000 Configuration application. Refer to the Configuration manual.

3.2.1.7 Extension

The SeaCom 2000 local telephone number of the telephone from which the call was made.

3.2.1.8 Trunk

The SeaCom 2000 call number of the trunk through which the call was made.

3.2.1.9 Error message

This field will be empty if no errors exist. If a an error is encountered during the attempt by the SeaCom 2000 processor to append a call data record, this field will contain an error text.

3.2.1.10 Invoiced

The field will show false if the record is not marked invoiced, and will display true if the record is marked invoiced.

Call Data Viewer FILTERED!

Time of call	Acc.	Called number	Duration	Charge	Group	Extension	Trunk	Error message
1/22/99 9:32:54 AM	11	0101086175209	9	\$0.08	Sat #1	10	00	
1/27/99 2:56:02 PM	11	010100046317091554	38	\$0.32	Sat #1	10	00	
2/3/99 9:28:41 AM	11	10100046317091554	223	\$47.17	Sat #1	10	00	
2/5/99 2:56:37 PM	11	10100046317091554	294	\$59.00	Sat #1	10	00	
2/5/99 3:08:50 PM	11	101086175209	116	\$29.33	Sat #1	10	00	
2/12/99 10:24:01 AM	11	10100046317091554	192	\$42.00	Sat #1	10	00	
2/19/99 11:51:31 AM	11	10100046317091554	11	\$11.83	Sat #1	10	00	
3/1/99 9:09:49 AM	11	10100046317091554	1545	\$267.50	Sat #1	10	00	
3/1/99 11:48:17 AM	11	10100046317091554	207	\$44.50	Sat #1	10	00	
3/4/99 4:00:12 PM	11	101086175209	259	\$53.17	Sat #1	10	00	

Filters

User first name: Account:

☒ Non invoiced only
☐ Invoiced only
☐ Invoiced and non invoiced

Summary

Selected user:

Number of calls: Total value:

Figure 8. The Call Data Viewer

3.2.2 Selecting the user of which to view call data

When selecting a user in the User Data Editor, the account number of the user is transported to the Account item of the filter window, thereby selecting call data of the selected user. This means that when navigating through users in the User Data Editor, the Call Data Viewer will display call data of the currently selected user.

If this simple direct method of selecting which call data to view is not satisfying, the filter window described below will give some possibilities.

3.2.3 The filter window - how to apply filtering of call data

The filter window contains 3 items helping the user to restrict the number of call data displayed.

3.2.3.1 User name filtering

By entering the first name of a user, into the "User first name" edit box, the account number of that user will be transferred to the "Account" edit box which in turn is used as the filter for the displayed call data.

Altering the "User first name" box is the same as altering the "First name" box of the User Data Editor.

3.2.3.2 Account filtering

If you wish to display call data for a known account number, then this can be entered directly into the "Account" edit box of the filter window.

3.2.3.3 Selecting all users

Press the "Select all users" if call data of all users are to be inspected.

3.2.3.4 Invoiced filtering

3 radio buttons on the filter window selects either all call data (Invoiced and non-invoiced) or all invoiced call data or all non-invoiced call data.

3.2.4 The summary window

The summary window contains 3 items.

3.2.4.1 Selected user

The leftmost item shows the currently selected user, or it shows an informative string whenever no single user is selected, or whenever an account filter is entered manually.

3.2.4.2 Number of calls and total value display

The "Number of calls" box shows the number of calls displayed in the call data viewer string grid. If any filtering is included, this number will change always to reflect the number of calls to be seen in the display or printed if call data printing is selected.

The "Total value" read only item shows the sum of all call data records displayed in the call data display. Invoiced or non-invoiced, single user or many users. Always the total sum of charges.

3.2.5 Operating the call data

Operating the call data is carried out by means of the menu items. Refer to figure 7.

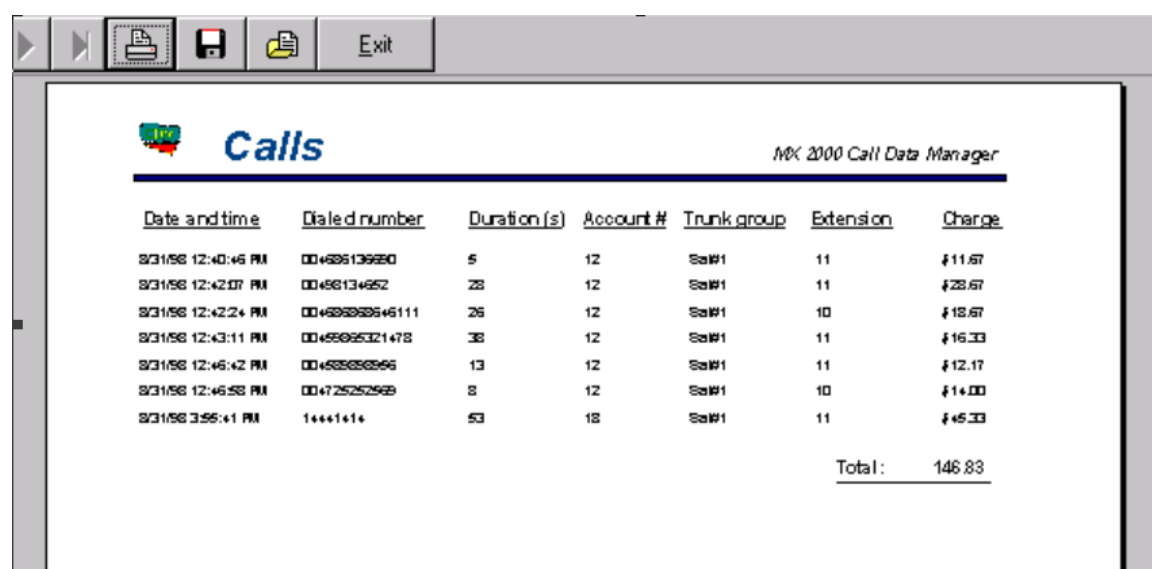
3.2.5.1 Deleting call data

Call data can be deleted by using the “Delete selected call data”. Choosing this menu item will delete all call data displayed in the call data display. Be sure to apply the appropriate filtering before pressing the delete button.

Deleting call data is an important operation, as this is the only way to prevent the SeaCom 2000 disk from running out of disk space. The person responsible for the maintenance of call data must follow a strategy of, as an example, deleting call data every 3 months.

3.2.5.2 Previewing and printing of call data

Two menus “Preview call data” and “Print call data” implement the possibility of printing and previewing call data. The print out will contain exact the call data displayed in the call data display, so the right filtering must be applied before printing. Figure 9 shows a part of a print preview.



Date and time	Dialed number	Duration (s)	Account #	Trunk group	Extension	Charge
8/31/98 12:40:46 PM	00468613680	5	12	Sa#1	11	\$ 11.67
8/31/98 12:42:07 PM	00468134652	28	12	Sa#1	11	\$ 28.67
8/31/98 12:42:24 PM	00468688646111	26	12	Sa#1	10	\$ 18.67
8/31/98 12:43:11 PM	00468885321478	38	12	Sa#1	11	\$ 16.33
8/31/98 12:45:42 PM	00468888896	13	12	Sa#1	11	\$ 12.17
8/31/98 12:46:58 PM	00472525298	8	12	Sa#1	10	\$ 14.00
8/31/98 3:55:41 PM	14441414	53	18	Sa#1	11	\$ 45.33
Total:						146.83

Figure 9. The top of a call data printing.

3.3 Charge editor

When selecting the charge editor, the main menu shown in figure 10 becomes active and visible.

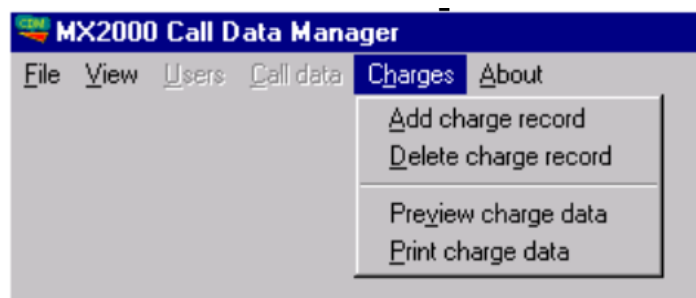


Figure 10. The main menu active when the call data viewer is selected

Operation of the SeaCom 2000 Call Data Management system requires that the user has entered the rates according to which the users shall be charged. The Charge editor is used to maintain a list of telephone call rates.

The rates are base upon:

- Trunk group (i.e. the type of line used. Satellite, Cellular, shore line etc.)
- The B number
- The call duration.

Figure 11 shows the Charges Editor.

#	Trunk group	Digits mask	Free time	Base charge	Charge pr. minute
102	Sat #1	01010	0	\$0.00	\$0.50
103	Sat #1	010100046	0	\$0.00	\$2.50
105	Sat #1	*	0	\$10.00	\$10.00
112	Sat #1	*	0	\$10.00	\$10.00
113	Sat #1	*	0	\$10.00	\$10.00
114	Sat #1	*	0	\$10.00	\$10.00
115	Sat #1	*	0	\$10.00	\$10.00
116	Sat #1	*	0	\$10.00	\$10.00
117	Sat #1	*	0	\$10.00	\$10.00
118	Sat #1	*	0	\$10.00	\$10.00
119	Sat #1	*	0	\$10.00	\$10.00

Filters

Trunk group

Figure 11. The Charges Editor displaying sample charge records.

3.3.1 The charge record display

Most of the Charges Editor is devoted the record display. 5 columns contain editable data.

The charges, trunk groups and digits mask are entered, by the user, directly into the charge record display. Data is written to the database whenever a new record is selected, or when the OK button is pressed.

3.3.1.1 Trunk group

The trunk group column displays the trunk group for which the record is applicable.

This is the first data tested by the SeaCom 2000 Processor while trying to calculate the price of the calls. If no match between the trunk group actually used and any charge records found in the SeaCom 2000 database, then an error exists, the price will be set to zero and an error message will be inserted into the call data record.

Ensure that the trunk group names entered in the Advanced Analogue Trunk set-up of the SeaCom 2000 Configuration can also be found in the charges database.

3.3.1.2 Digits mask

When, while calculating the price of a call, the SeaCom 2000 processor finds a charge record with matching trunk group, then the B digits are checked against the "Digits mask" of the record.

The digit masks states the digits that must be equal between the B number and the mask in order to apply the rates of the record. An example.

B number:	004586136690	Mask:	0045***	will match
B number:	004631480668	Mask:	0045	no match
B number	004586136690	Mask	0045**86	will match

As seen from the example, the '*' character can be used as "don't care" digits.

Be sure always to include a default mask = '*' and default rates for all trunk groups.

3.3.1.3 Free time

This field sets the minimum duration of a charged call, and sets the number of free seconds. Calls having a duration less than the free time will not be charged (but still logged), and call having a duration that exceeds the free time will have the free time subtracted before the price is calculated on the basis of the following two rates.

3.3.1.4 Base charge and Charge pr. Minute

Call having a duration that exceeds the free time will have a price calculated as:

$$\text{Charge} = \text{Base charge} + ((\text{Duration of call} - \text{Free Time}) * \text{Charge pr. Minute}) / 60$$

3.3.2 Editing the charge database

The charges, trunk groups and digits mask are entered, by the user, directly into the charge record display. Data is written to the database whenever a new record is selected, or when the OK button is pressed.

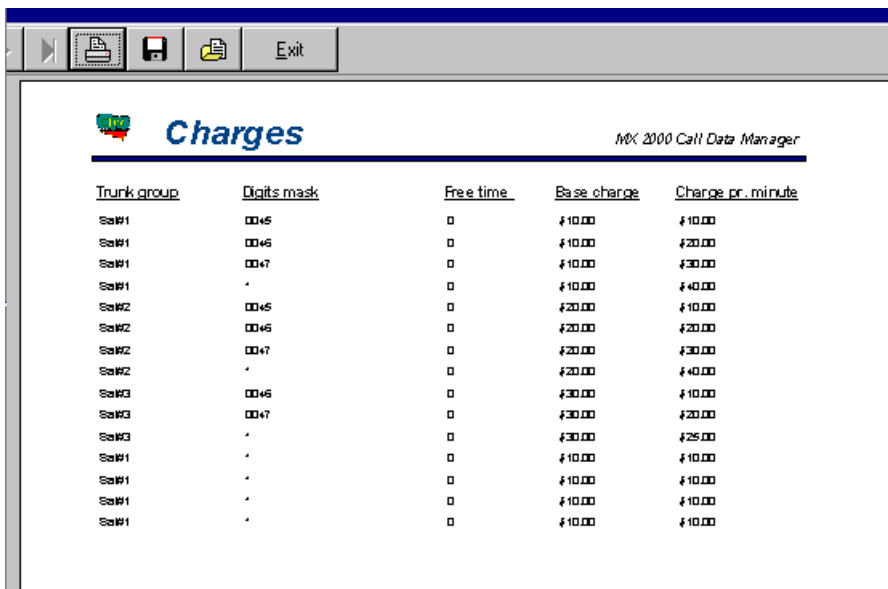
Adding, deleting and printing is carried out using the buttons below the string grid.

3.3.2.1 Adding and deleting charge records

Use the Add and Delete menus to add new charge records and to delete the currently selected record.

3.3.2.2 Previewing and printing of the charge records

The charge rates can be printed and previewed using the "Preview charge data" and "Print charge data" menus. Figure 12. Shows a sample printout of the charge rates.



Trunk group	Digits mask	Free time	Base charge	Charge pr. minute
Sa#1	0045	0	\$10.00	\$10.00
Sa#1	0045	0	\$10.00	\$20.00
Sa#1	0047	0	\$10.00	\$30.00
Sa#1	*	0	\$10.00	\$40.00
Sa#2	0045	0	\$20.00	\$10.00
Sa#2	0045	0	\$20.00	\$20.00
Sa#2	0047	0	\$20.00	\$30.00
Sa#2	*	0	\$20.00	\$40.00
Sa#3	0045	0	\$30.00	\$10.00
Sa#3	0047	0	\$30.00	\$20.00
Sa#3	*	0	\$30.00	\$25.00
Sa#1	*	0	\$10.00	\$10.00
Sa#1	*	0	\$10.00	\$10.00
Sa#1	*	0	\$10.00	\$10.00
Sa#1	*	0	\$10.00	\$10.00

Figure 12. Printing the charges.

3.3.3 Applying a trunk group filter

The filter window of the Charges Editor contains an item "Trunk group", which can be altered in order to sort out selected trunk group(s). This can be use full when the Charges database get large, and many trunk groups exists.

3.4 Short number editor

Dialling out via the CDM system can be assisted by a short number conversion table. This table is edited using the short number editor.

When selecting the short number editor, the main menu shown in figure 13 becomes active and visible.

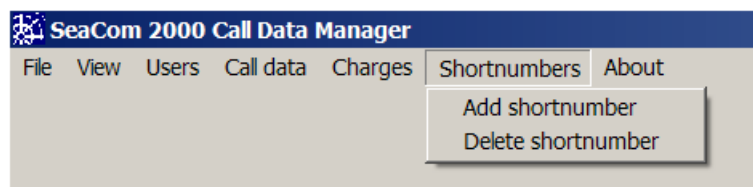
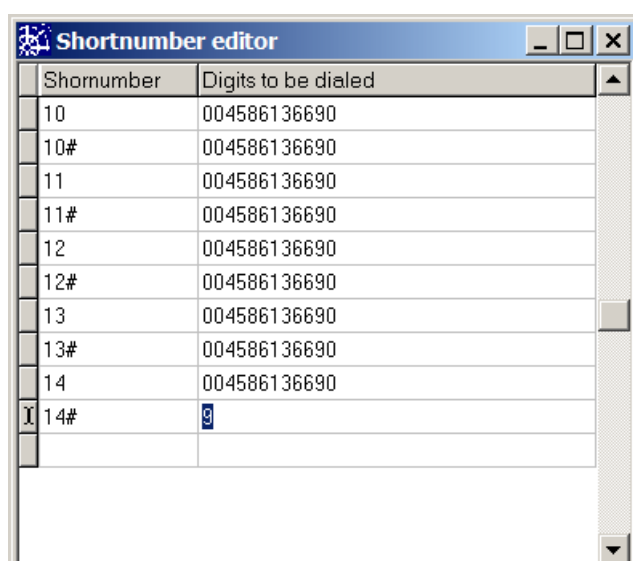


Figure 13. The main menu active when the short number table is shown

The short number editor has two columns, the first column showing the short numbers and the second showing the digits to be dialed out when the short number is used. Figure 14 shows an example. Note that the short numbers are shown with both the # terminator and without. If both dial timeout and the # end key has to be used, this must be the case for each short number.



Shornumber	Digits to be dialed
10	004586136690
10#	004586136690
11	004586136690
11#	004586136690
12	004586136690
12#	004586136690
13	004586136690
13#	004586136690
14	004586136690
14#	

Figure 14. The Short number Editor displaying sample of short numbers